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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,833	08/20/2003	Grzegorz J. Kusinski	020030-000910US	7656
20350	7590	06/08/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			YEE, DEBORAH	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/645,833	Applicant(s) GRZEGORZ J. KUSINSKI ET AL	
	Examiner Deborah Yee	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-12-04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 to 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thomas (US Patent 6,273,968).
4. Thomas'968 on lines 1 to 67 of column 6 discloses a process for manufacturing a high-strength, high-ductility alloy carbon steel comprising the steps of forming a carbon steel alloy having a microstructure comprising laths of martensite alternating with films of retained austenite followed by cold working which meets the recited process. Note first paragraph of column 6 teaches steels can be subjected to cold forming operations to produce sheet, wire or rod.
5. Even though tensile strength of at least 150Ksi or 150 to 500Ksi recited by claims 1 and 2 respectively are not taught, such would be expected since composition and

process limitations are closely met. Moreover, it is well known in the art that cold deforming steel increases steel strength.

6. Even though the cold deforming reduction of at least 20%, at least 25% or 25 to 50% per pass as recited by claims 3 to 5 respectively are not disclosed, such would not be a patentable difference since it would be a matter of choice and routine optimization well within the skill of the artisan and productive of no new and unexpected results. Moreover, applicant has not demonstrated criticality of reduction rate (e.g. by comparative test data).

7. Thomas teaches cold forming operation, in general, which would infer no heat treatment between passes, and also is conventionally performed at temperatures below 100C; hence the limitations of claims 6 to 8 are met.

8. Thomas teaches cold forming to produce wire or rod. Although drawing through a die as recited by claim 9 is not disclosed, such would be inferred since this is the common conventional method for producing wire or rod.

9. Thomas teaches cold forming to produce sheet. Although rolling as recited by claim 10 is not disclosed, such would be inferred since this is the common conventional method for producing sheet.

10. Thomas in claim 1 of column 6 teaches forming a steel alloy composition having a martensite start temperature of at least 350C, heating in the austenitization temperature range to produce homogeneous austenite phase and cooling at a rate to produce a microstructure devoid of carbide and contains laths of martensite in between films of retained austenite in uniform orientation which meets claims 11 to 14.

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11. Thomas on line 15 of column 5 teaches an austenization temperature of 900 to 1150C, and is within the claimed range of 800 to 1150C recited by claim 15.

12. Claims 1 to 10 and 16 to 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thomas (US Patent 4,619,714).

13. Thomas' 714 in claims 1 to 4 of column 6 discloses carbon steel alloy having a microstructure comprising ferrite and laths of martensite alternating with films of retained austenite having been processed in substantially the same manner as claimed by applicant. Note lines 17 to 24 of column 1 discloses microstructure having a dual-phase steel defined as a ferrite matrix and a dispersed second phase that can be lath martensite with retained austenite.

14. Thomas' 714 in examples 1 to 7 of columns 5 and 6 process steel wire, rod, or sheet having a tensile strength ranging from 300 to 405Ksi which meets the tensile strength of at least 150Ksi and 150 to 500Ksi recited by claims 1 and 2, respectively.

15. Even though the cold deforming reduction of at least 20%, at least 25% or 25 to 50% per pass as recited by claims 3 to 5 respectively are not disclosed, such would not be a patentable difference since it would be a matter of choice well within the skill of the artisan and productive of no new and unexpected results. Moreover, applicant has not demonstrated criticality of reduction rate (e.g. by comparative test data).

16. Thomas' 714 in examples 1 to 7 of columns 5 and 6 teach cold forming without heat treatment between passes as recited by claim 6, and is performed at ambient

temperature as recited by claims 7 and 8, and rod or wire is produced by drawing with die as recited by claim 9 and sheet is formed by rolling as recited by claim 10.

17. Thomas'714 in claims 1 to 4 of column 6 discloses a process of forming microstructure in the same manner as claimed by applicant by heating at austenitizing temperature, cooling to forming austenite and ferrite followed by further cooling to convert austenite into martensite and retained austenite. See prior art examples in column 5 and 6 teach austenitizing temperature at 1050C (within the 1050 to 1170C recited by claim 18) and cooling to ferrite/austenite temperature at 800C (within 800 to 1000C recited by claims 17 and 18). Even though prior art teaches rolling during heating steps, such would not be a patentable difference since additional steps would not be excluded from process claim reciting "comprising". Moreover, the rolling would be appear to affect the basic and novel characteristics of the present invention.

18. Prior art examples 4 of column 5 discloses a composition that meets claim 19.

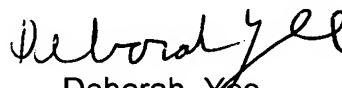
19. The unapplied references have been cited to further depict the state of the art for steels having a microstructure of lath martensite/austenite.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Deborah Yee
Primary Examiner
Art Unit 1742

dy